

Variability and Character Association Studies in Sorghum Germplasm (*Sorghum bicolor* (L.) Moench)

B Vijaya Lakshmi, T Srinivas and D Ramesh

Department of Plant Breeding, Agricultural College, Bapatla, A. P.

ABSTRACT

Variability, correlation and path analysis were carried out for grain yield and yield contributing traits in 122 sorghum accessions. Grain yield/plant showed higher estimates of GCV and PCV followed by fodder yield/plant, panicle weight, panicle length, 100 grain weight and plant height. High heritability coupled with high genetic advance were obtained for plant height, panicle weight, grain yield/plant and fodder yield/plant indicating that these traits are predominantly under the control of additive gene action and hence, these characters can be improved by selection. Correlation studies revealed that grain yield per plant was positively and significantly associated with days to 50 per cent flowering, panicle length, panicle weight, and 100 grain weight indicating the importance of these traits in developing high yielding sorghum varieties. Further, path analysis revealed high direct effect of panicle weight for grain yield/plant along with considerable high positive indirect effect *via* panicle length followed by 100 grain weight indicating the importance of these characters during selection for high yield

Key words: *Correlation, Germplasm, Path coefficient analysis, Variability.*